

RF Exposure Evaluation, FCC ID# RAR20000001

- (1) This radio module will be integrated into an enclosure with BelAir FCC approved U-NII band 5GHz backhaul radio module(s). Co-location compliance for multiple frequency exposure criteria to the power density exposure limit is detailed in the table below.
- (2) The antenna(s) used with this device are integral and will be installed to provide a minimum separation distance of 20cm from all persons and will not be co-located or operated in conjunction with any other antenna or transmitter not described in this application.
- (3) This integrated modular transmitter will only be operated according to the exposure conditions described in this application. End users and installers will be provided with antenna installation and transmitter operating conditions for satisfying RF exposure compliance.

Power Ratio Summation for Integrated Co-located Radios at 20cm.						
802.11b FCC I.D.# RAR20000001 (mW/cm ²)	802.11a FCC I.D.# RAR2000xxxx (mW/cm ²)	802.11a FCC I.D.# RAR2000xxxx (mW/cm ²)	802.11a FCC I.D.# RAR2000xxxx (mW/cm ²)	Sum of Worst Case Power Density at 20cm (mW/cm ²)	General Exposure Limit (mW/cm ²)	
Radio 1	Radio 2	Radio 3	Radio 4			
0.5966	0.1336	-----	-----	0.7302	1.0	PASS
0.5966	0.1336	0.1336	-----	0.8638	1.0	PASS
0.5966	0.1336	0.1336	0.1336	0.9974	1.0	PASS

The typical worst case transmitter duty cycle is 95%. Therefore the conducted power has been corrected from 100% to 95% to address RF exposure.

802.11b Radio

Maximum conducted power = 423.3mW @ a transmitter duty cycle of 95% & cable loss of 0.5dB. Antenna gain = 8.5dBi, therefore the power density at 20cm = 0.5966mW/cm².

802.11a Radio

Maximum conducted power = 21.2mW @ a transmitter duty cycle of 95% & cable loss of 0.5dB. Antenna gain = 15dBi, therefore the power density at 20cm = 0.1336mW/cm².

Note: This calculation includes the 0.5dB in cable loss from the RF port to the antenna.